

Purpose: We investigated the patients who underwent ESWL to find out which factors influenced the outcome and built a logistic regression model to estimate the probability of stone free after ESWL.

Materials and Methods: From January 2013 to December 2013, we retrospectively reviewed the clinical status of 641 patients with solitary urinary calculus who underwent ESWL in our hospital. These patients were divided to the renal stone group and the ureteral stone group. We analyzed the pre-ESWL characteristics of these patients.

Results: The stone-free rate was 54.8% in all patients. The stone-free rates were 46.7% and 67.8% in renal stone group and ureteral stone group, respectively. In the multivariate logistic regression for the renal stone group, BMI, stone length and stone width are the independent factors which affect the success rate. In the multivariate logistic regression for the ureteral stone, only stone length is the independent factor. A logistic regression model was designed to estimate SFR, which has a sensitivity of 77.8% and specificity of 75.5%.

Conclusion: BMI, stone length, stone width, and kidney or ureteral stone are all prognostic factors influencing the outcome of ESWL. Logistic regression model to predict SFR can help us evaluate whether the patient has favorable outcome after ESWL or not.

NDP068:

A SMALL TRICK ON CYSTOSCOPIC LITHOTRIPSY WHEN USING LITHOCLAST FOR TREATING BLADDER STONE

Kuang-Yu Chou^{1,2}, Thomas I-sheng Hwang^{1,2}, Te-Fu Tsai^{1,2}. ¹ Division of Urology, Department of Surgery, Taiwan; ² Shin Kong WHS Memorial Hospital, Taipei, Taiwan

Purpose: Bladder stones are the most common manifestation of lower urinary tract lithiasis, currently accounting for 5% of all urinary stone disease. The cystoscopic lithotripsy is one of the least invasive procedures. Modern series report the use of the holmium laser, electrohydraulic lithotripter, and lithoclast technology, all with success in both adults and children. Now a day, the Holmium laser is commonly used, but the laser probe is relatively expensive. The electrohydraulic lithotripter is not so powerful and the mucosal damage is quite common. The lithoclast, boast of no or minimal consumable, has acceptable effectiveness on stone fragmentation. The lithoclast is still widely used on treating bladder stone.

Materials and Methods: We used the d Methods: most common manifestation of lower urinary tract channel of 21 or 22 Fr. cystoscope to form a route for passing the probe of lithoclast. The working channel was big enough to have the probe jump or vibrate too much in it. Thus, the stone will jump inside the bladder, and cause the aiming of the stone difficult. And the working channel of cystoscopy has a nipple at the rear end for preventing water leakage. The opening of the nipple might be too big for excessive water leaking and cause difficulty of inflation of the bladder.

Results: We use this trick to enable effective stone fragmentation, decrease the water leaking, and protect the sheath of the cystoscope. There was no extra consumable needed since the pusher of the double-J ureteral stent is disposable. We are glad to share the experience with the other urologist.

NDP069:

ULTRASONIC LITHOTRIPTER TO ELIMINATE CYSTINURIA RELATED PROTEIN-RICH RENAL STONE

Chin-Wei Kuo, Jensen Lin. Divisions of Urology, Department of Surgery, Changhua Christian Hospital, Changhua, Taiwan

Purpose: Cystinuria is an inherited autosomal recessive disease that is characterized by the formation of cystine stones in the kidneys, ureter, and bladder. The roles of treatment include eliminate stone, increase solubility and decrease concentration of cysteine. However, recurrent urolithiasis is common problem in this kind of patients. We demonstrate one cystinuria patient who suffered from persistent protein-rich renal stone with pyelonephritis. And the stone was eliminated via ultrasonic lithotripter.

Case: A 13 y/o female, who was diagnosed as cystinuria with bilateral renal stone in 2013. We arranged PCNL accompanied with ESWL and URSL for stone removal. However, in 2015, recurrent APN was noted. The URS revealed massive soft, elastic and white stone in bilateral

kidney. We use lithoclast to disintegrate the stone first, but the result is not satisfied due to soft stone and migrates easily. And recurrent APN with hydronephrosis were noted. Finally, we tried URS with ultrasonic lithotripter to remove the stone. The marvelous result was noted with nearly total removal of stone (with VIDEO). And she was discharged uneventfully. The post OP follow up showed no hydronephrosis or any pyelonephritis sign.

Results: Cystinuria is a rare inherited autosomal recessive disease. Recurrent urolithiasis is a big problem in this kind of patients. In our case, the recurrent stone composition showed protein rich calcium with soft and elastic morphology. It is hard to use lithoclast to disintegrate it and residual stone will cause recurrent hydronephrosis and APN. The ultrasonic lithotripter connected with suction bottle can suck the stone toward the probe. And the soft component is easy to remove via this device. On the other hand, we can remove turbid urine via irrigate with lots normal saline with persistent suction. And the result is satisfied.

Conclusion: Ultrasonic lithotripter is a good device to remove soft, elastic, protein rich renal stone caused by cystinuria.

NDP070:

INITIAL EXPERIENCE USING BALLOON DILATOR DURING PERCUTANEOUS NEPHROLITHOTOMY

Pao-Hwa Chen, Meng-Yi Yan, Bai-Fu Wang, Heng-Chieh Chiang, Jesen Lin, Chang-Pao Chang, Kuo-Hsuan Huang, Sheng-Hsien Huang, Chun-Chi Chen, Hung-Jen Shih, Jian-Xiang Zhang, Jian-ting Chen. Divisions of Urology, Department of Surgery, Changhua Christian Hospital, Changhua, Taiwan

Purpose: The endoscopic management of urolithiasis have been proven to provide stone clearance for almost all of patients. The choice of management depend on location and size of the calculi. For large symptomatic renal calculi, percutaneous nephrolithotomy (PCNL) provide the highest stone clearance rate. The method of establishing percutaneous nephrostomy tract have evolved through the years. Balloon dilators provide a fast one-step method in establishing tract. Here, we present our initial 1 year experience with balloon dilator.

Materials and Methods: Our hospital started using balloon dilator for nephrostomy tract during PCNL since August 2014. From August 2014 to July 2015, we performed 154 PCNL procedures at our hospital under C-arm guidance. We retrospectively review the medical records and record the peri-operative and post-operative data and complications. We analyze the data and review the related complications. Clavien-dindo classification was used to analyze the post-operative complication.

Results: One hundred fifty-four patients underwent PCNL procedure from August 2014 to July 2015. The men to women ratio is 2:1. The average stone burden from KUB is 771 mm². The main puncture are senior residents (R4 to Fellow). The stone free rate of 78%. Patients with residual stone are the ones with higher stone burden on KUB (average: 1500 mm²), which is twice the average of the whole patient population. Total patient experienced post-operative complication is 48% (n = 64). Most of the complication is Clavien grade 1–2. There were 7 patients with Clavien grade 3–4 and no mortality.

Conclusion: The initial experience with balloon dilator has been very positive. The complication rate has been similar to other reported from CROES studies. Future randomized trials are needed to establish the benefit of balloon dilator.

Laparoscopy

NDP071:

ROBOTIC-ASSISTED LAPAROSCOPIC PARTIAL CYSTECTOMY FOR URINARY BLADDER PARAGANGLIOMA: A CASE REPORT

Shu-Chi Wang, Kun-Yuan Chiu. Division of Urology, Department of Surgery, Taichung Veterans General Hospital, Taichung, Taiwan, Republic of China

Extra-adrenal pheochromocytomas are known as paragangliomas. Managing these functional tumors by minimally invasive surgery is a surgical challenge. We report a male patient with urinary bladder paraganglioma. Robotic-assisted laparoscopic partial cystectomy successfully performed without peri-operative complication.